

COPY

CONFIGURATION IN A CONFIGURABLE SYSTEM ON A CHIP

Brian Fox

Andreas Papaliolios

ABSTRACT OF THE INVENTION

The present invention allows a user to customize the configuration sequence of a configurable system on a chip (CSoC), thereby adding considerable flexibility to the configuration process. The present invention also provides certain features, transparent to the user, which optimize system resources and ensure the correct initialization of the CSoC. The CSoC leverages an on-chip central processing unit (CPU) to control the configuration process of the configurable system logic (CSL). Advantageously, the CSL configuration memory cells as well as other programmable locations in the CSoC are addressable as part of a system bus address space. The system bus is a multi-use structure that can be used for both configuring and reading of memory cells. In this manner, the CSoC optimizes system resources.